TAOGLAS

Datasheet

36 mm Miniature Speaker – 8 Ohm – IP67

Part No:
SPKM.36.8.B

Description:

36mm Miniature Speaker - 8 Ohm 1W RMS – IP67

Compact design for integration in a wide range of products

Features:

8 Ohm Impedance

Rated Input Power 1W RMS

Max Input Power 1.5W peak

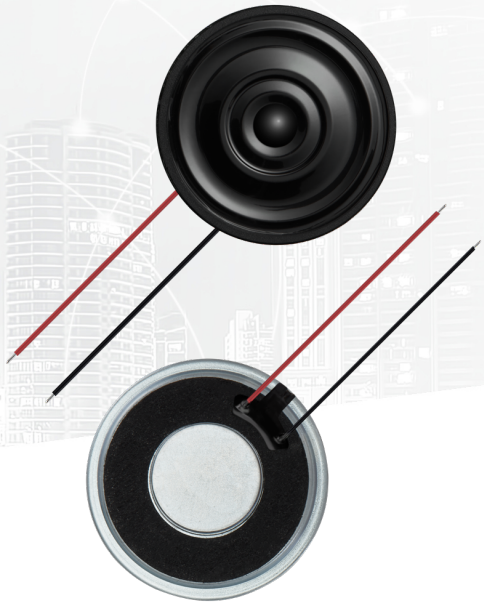
High Sensitivity

Dimensions: Ø36 x 3.5mm

Connector: Wire Lead

RoHS & Reach Compliant

1. Introduction



Featuring a compact design, enabling ease of integration in a wide range of electronics products, including IoT devices, with high levels of long-term reliability and best in class performance Taoglas products are known for.

Our 36 mm Miniature Speake has an IP67 rating, offers 100 Hz - 10 kHz frequency response, 98 dB sensitivity, 8 Ohm impedance, 1W RMS and 1.5W Peak power handling Proven performance in demanding applications where accurate reproduction of voice communications is required. Taoglas added speakers to our product portfolio to provide both reliable connectivity and high-quality audio solutions from one trusted company.

Please contact your regional Taoglas customer support team for more information or installation guidelines.

2. Specifications

Electroacoustic	
Sound Pressure Level	98 dB SPL (±3dB) @ 1000Hz (0 dB SPL = 20 µPa) Measuring Condition: 0.5W (Sine wave) @ 0.1 m with baffle
Impedance	8 Ω (±15%) @ 1 kHz with 2 V input signal and without baffle in place
Frequency Response	100 Hz – 10 kHz
Resonant Frequency	600 Hz (±15 %) Typical frequency @ 1 V
Nominal Input Power	1 Watt
Maximum Input Power	1.5 Watt
Distortion	Less than 10% @ 1KHz, with input levels up to 2 V RMS
Mechanical	
Height	3.5 mm
Diameter	36 mm
Weight	0.022 Kg
Connector	Wire leads - AWG#32 (UL1571)
Material	PEI diaphragm with Neodymium Magnet, (without enclosure)
Environmental	
Temperature Range	-40°C to 80°C
Humidity	Non-condensing up to 95% Relative Humidity @ up to 65°C

Reliability Testing		
High Temperature Test	High Temp	+80°C (±2°C)
	Duration	96 Hours
Low Temperature Test	Low Temp	-40°C (±2°C)
	Duration	96 Hours
Heat Shock Test	High Temp	+75°C (±2°C)
	Low Temp	-40°C (±2°C)
	Changeover time	<30 Seconds
	Duration	1 Hour
	Cycle	100 cycles
Humidity Test	Temp	+40°C (±2°C)
	Relative humidity	90 - 95 %
	Duration	96 Hours
Temperature Cycle Test	Temp	-40°C to +75°C
	Duration	45 minutes
	Temperature gradient	1°C to 3°C / minute
	Cycle	25 cycles
Drop Test	Mounted with dummy set mass	100 g
	Height	1 m
	Cycle	6 cycles
Load Test	White noise (EIA filter) for 96 hours @ 0.8 W (2.53 V) input power	
	White noise (EIA filter) for 1 minute @ 1.0 W (2.83 V) input power	

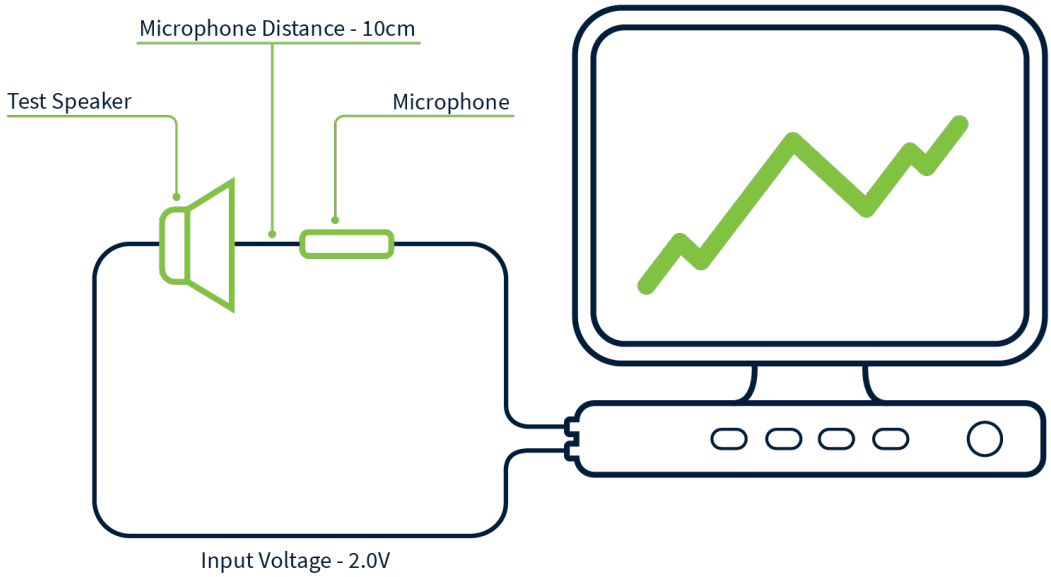
* SPL (Sound Pressure Level) as specified did not deviate more than ±3 dB from initial value, with no significant damage after testing.

3. Speaker Mesurement Conditions

3.1 Conditions

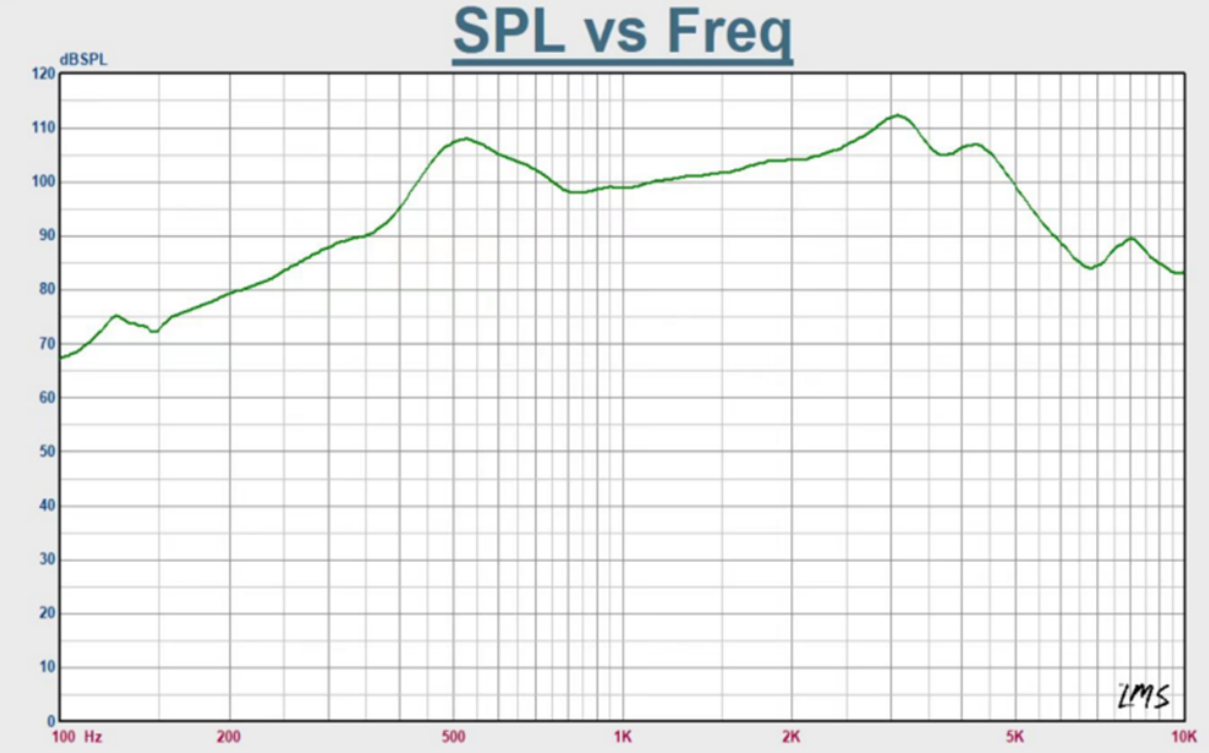
Standard Test Fixture Conditions	
Input Power	0.5 Watts (2 V)
Mode	TSR
Potentiometer Range	50 dB
Sweep Time	0.5 seconds

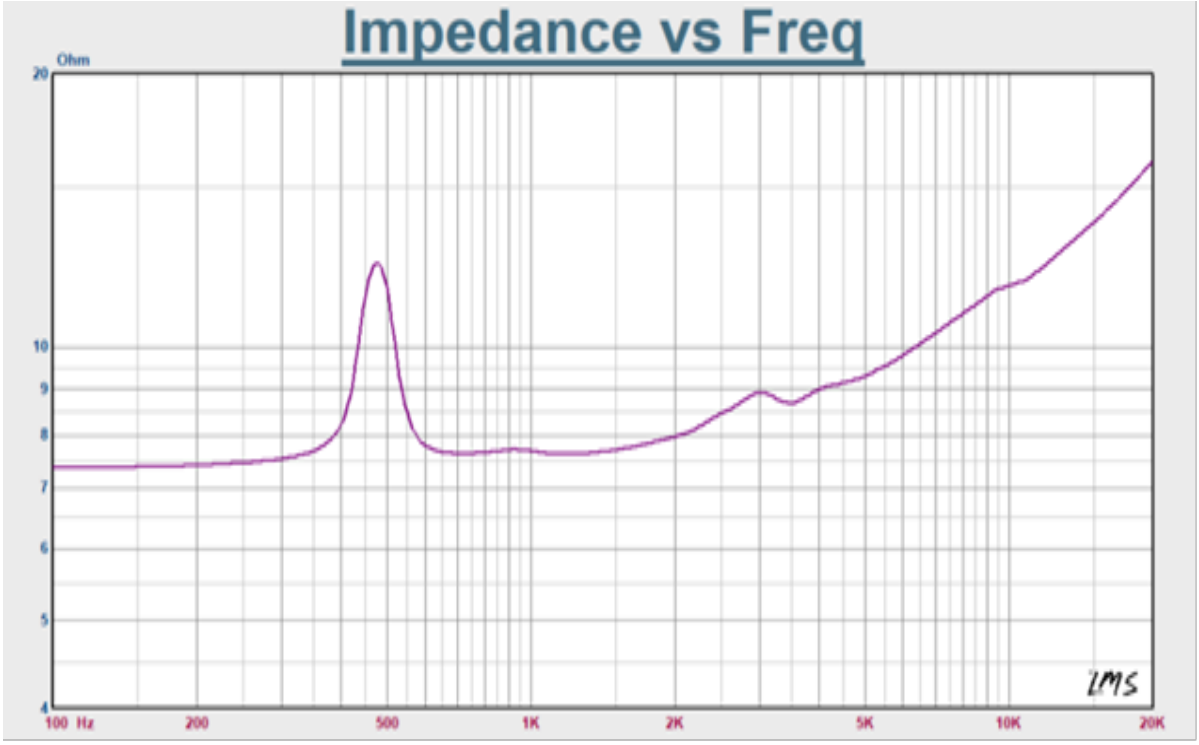
3.2 Measurement Fixture Diagram



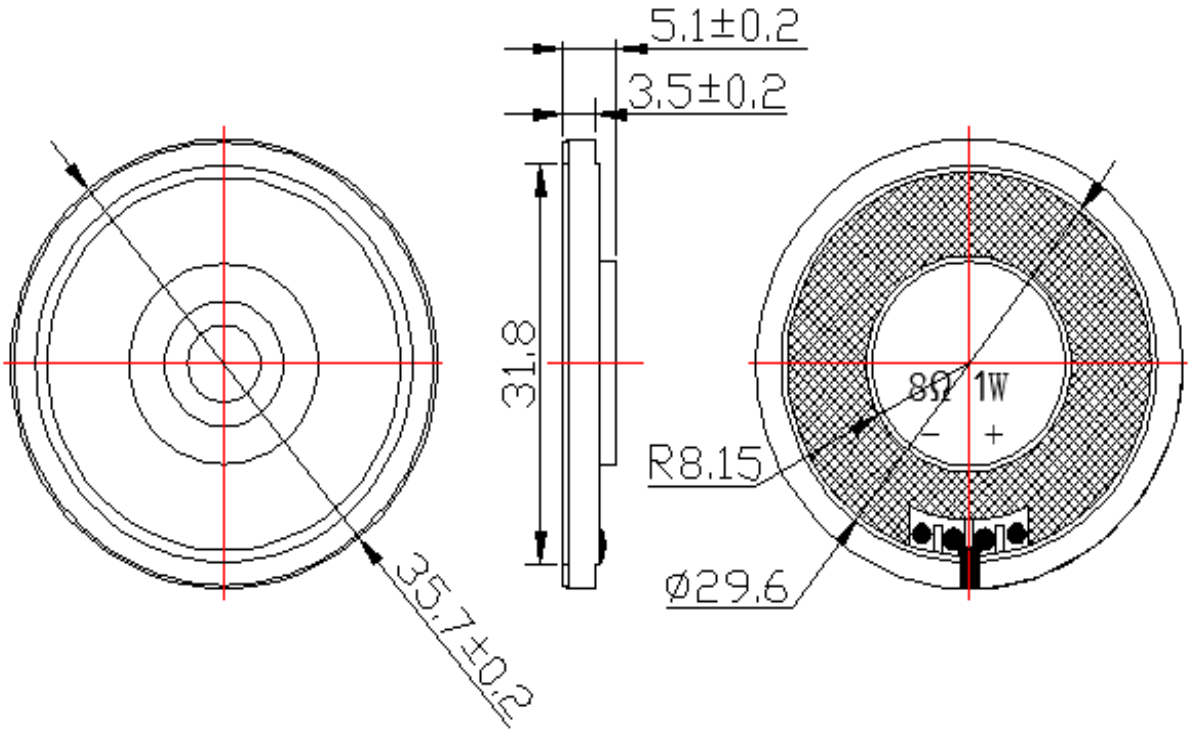
4. Speaker Characteristics

4.1 SPL vs Frequency





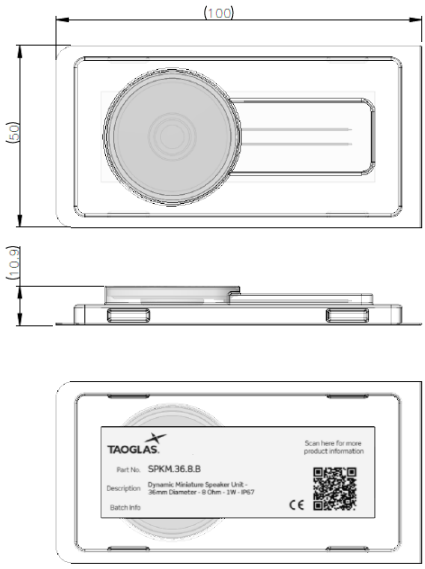
5. Mechanical Drawing (Units: mm)



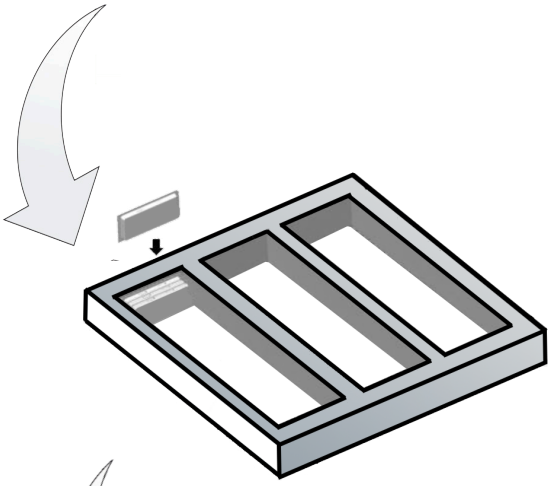
ITEM	DESCRIPTIONS	SPEC.	QTY	REMARK
1	Frame	36 mm	1	Fe
2	Voice coil	8Ω	1	Copper
3	Magnet	Ø12.5×1. 5 mm	1	(Nd-Fe-B)
4	Diaphragm	34. 8×75μ	1	PET
5	Lead wire		2	

6. Packaging

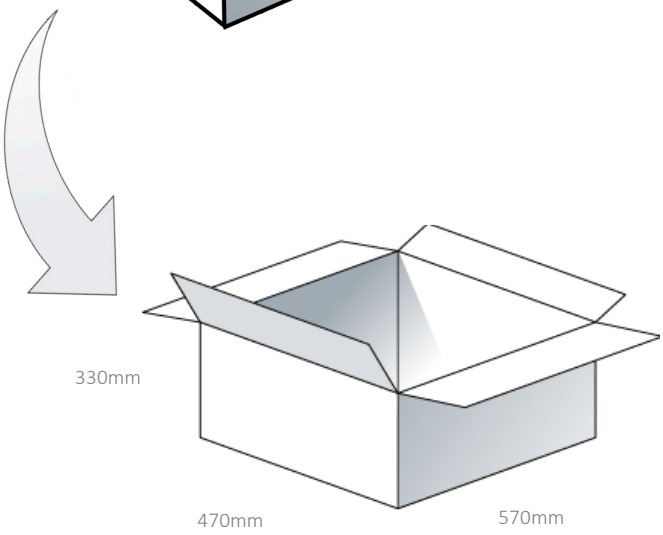
1 pcs SPKM.36.8.B per Blister
Dimensions – 100 x 50 x 10.9mm



272 pcs SPKM.36.8.B per EPE Tray



1360 pcs SPKM.36.8.B per Carton
Dimensions – 570 x 470 x 330mm



Changelog for the datasheet

SPE-23-8-085-A– SPKM.36.8.B

Revision: A	
Date:	11-04-2023
Changes:	Initial Release
Changes Made by:	Carlos Gomes

Previous Revisions

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